

AMENDMENTS TO THE CLAIMS:

Please replace all prior versions and listings of claims with the following listing of claims.

Listing of Claims:

1. (Previously Presented) An exterior surface treated article comprising a bulk-solidifying amorphous alloy having a mechanically treated exterior surface and having improved durability and fatigue resistance over a similar article without said mechanically treated exterior surface, the mechanically treated exterior surface comprising a plurality of deformations in the exterior surface.
2. (Previously Presented) The article of claim 1, wherein the deformations result from a mechanical surface treatment process applied to the exterior surface.
3. (Previously Presented) The article of claim 2, wherein the surface treatment process is a shot-peening process.
4. (Previously Presented) The article of claim 3 wherein the shot-peening process comprises a shot having a diameter of approximately 0.006 inches to 0.040 inches.
5. (Previously Presented) The article of claim 1 wherein the treated article is a golf club face insert or a shaft.
6. (Original) The article of claim 1 wherein the surface treatment process is a laser shock peening process, wherein the deformations are formed by a shock wave that ablates a portion of the exterior surface.
7. (Original) An article of bulk-solidifying amorphous alloy having an exterior surface with a plurality of deformations therein, wherein the deformations alter the exterior surface such that the article has improved durability and fatigue resistance as compared to a substantially identical article lacking the deformations in the exterior surface.

8. (Previously Presented) A method of improving the durability and fatigue resistance of an exterior surface treated article made from bulk-solidifying amorphous alloy, comprising:
applying a shot-peening process to at least a portion of an exterior surface of the article;
and
creating a plurality of deformations in the exterior surface by mechanically compressing a plurality of shots against the exterior surface to create a mechanically treated exterior surface,
wherein the article has an improved durability and fatigue resistance over a similar article without said mechanically treated exterior surface.

9. (Previously Presented) The article of claim 3, wherein the shot-peening process is applied to a substantial portion of the exterior surface.

10. (Previously Presented) The article of claim 1, wherein the improved durability and fatigue resistance is demonstrated as improved peak load for failure and increased cycles to failure under fatigue cycling.

11. (Previously Presented) The article of claim 10, wherein a ratio of the peak load for failure of the article versus the similar article is over 33/23.

12. (Previously Presented) The article of claim 10, wherein a ratio of the peak load for failure of the article versus the similar article is over 33/27.

13. (Previously Presented) The article of claim 10, wherein a ratio of the cycles to failure under fatigue cycling of the article versus the similar article is more than 30/2.

14. (Previously Presented) The article of claim 10, wherein a ratio of the cycles to failure under fatigue cycling of the article versus the similar article is more than 30/9.

15. (Previously Presented) The article of claim 10, wherein a ratio of the cycles to failure under fatigue cycling of the article versus the similar article is more than 15/2.

16. (Previously Presented) The article of claim 10, wherein a ratio of the cycles to failure under fatigue cycling of the article versus the similar article is more than 15/5.

17. (Previously Presented) The article of claim 10, wherein a ratio of the cycles to failure under fatigue cycling of the article versus the similar article is more than 30/5.

18. (Previously Presented) The article of claim 1, wherein the bulk-solidifying amorphous alloy comprises a ferrous alloy.

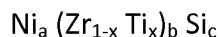
19. (Previously Presented) The article of claim 1, wherein the bulk-solidifying amorphous alloy comprises a Ni-containing alloy.

20. (Previously Presented) The article of claim 18, wherein the bulk-solidifying amorphous alloy is a ferrous alloy comprising Fe, Ni and Co.

21. (Previously Presented) The article of claim 1, wherein the bulk-solidifying amorphous alloy has the glass transition temperature of 550°C or above.

22. (Previously Presented) The article of claim 1, wherein the bulk-solidifying amorphous alloy has the glass transition temperature of 500°C or above.

23. (Previously Presented) The article of claim 22, wherein the bulk-solidifying amorphous alloy comprises a composition being represented by the following general formula:



where a, b and c are atomic percentages of nickel, zirconium plus titanium and silicon,

respectively, and x is an atomic fraction of titanium to zirconium, wherein;

$45 \text{ atomic \%} \leq a \leq 63 \text{ atomic \%}$,

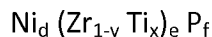
$32 \text{ atomic \%} \leq b \leq 48 \text{ atomic \%}$,

$1 \text{ atomic \%} \leq c \leq 11 \text{ atomic \%}$, and

$0.4 \leq x \leq 0.6$.

24. (Previously Presented) The article of claim 23, wherein the bulk-solidifying amorphous alloy further comprises V, Cr, Mn, Cu, Co, W, Sn, Mo, Y, C, B, P, Al, or combinations thereof.

25. (Previously Presented) The article of claim 22, wherein the bulk-solidifying amorphous alloy comprises a composition being represented by the following general formula:



where d , e and f are atomic percentages of nickel, zirconium plus titanium and phosphorus, respectively, and y is an atomic fraction of titanium to zirconium, wherein;

$50 \text{ atomic \%} \leq d \leq 62 \text{ atomic \%}$,

$33 \text{ atomic \%} \leq e \leq 46 \text{ atomic \%}$,

$3 \text{ atomic \%} \leq f \leq 8 \text{ atomic \%}$, and

$0.4 \leq y \leq 0.6$.

26. (New) A method comprising obtaining an article comprising a bulk-solidifying amorphous alloy and treating an exterior surface of the article such that the exterior surface treated article has a mechanically treated exterior surface and has improved durability and fatigue resistance over said article without said mechanically treated exterior surface, the mechanically treated exterior surface comprising a plurality of deformations in the exterior surface.

27. (New) The method of claim 26, wherein the deformations result from a mechanical surface treatment process applied to the exterior surface.

28. (New) The method of claim 27, wherein the surface treatment process is a shot-peening process.

29. (New) The method of claim 28, wherein the shot-peening process comprises a shot having a diameter of approximately 0.006 inches to 0.040 inches.

30. (New) The method of claim 26, wherein the treated article is a golf club face insert or a shaft.

31. (New) The method of claim 26, wherein the surface treatment process is a laser shock peening process, wherein the deformations are formed by a shock wave that ablates a portion of the exterior surface.

32. (New) The method of claim 26, wherein the bulk-solidifying amorphous alloy comprises a ferrous alloy.

33. (New) The method of claim 26, wherein the bulk-solidifying amorphous alloy comprises a Ni-containing alloy.

34. (New) The method of claim 32, wherein the bulk-solidifying amorphous alloy is a ferrous alloy comprising Fe, Ni and Co.

35. (New) The method of claim 26, wherein the bulk-solidifying amorphous alloy has a glass transition temperature of 550°C or above.

36. (New) The method of claim 26, wherein the bulk-solidifying amorphous alloy has a glass transition temperature of 500°C or above.